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Remarks

9 claims are currently on file.

The claims have been amended to more particularly claim what Applicant believes is the invention. In particular, Claim 1 has been amended to include a core which is compression-resistant in a direction essentially orthogonal to the plane defined by the first oriented strand face. Support for this inclusion can be found at paragraph 20 of the disclosure (lines 16-20). Applicant believes that no new matter has been introduced by this amendment. Additionally, Claim 39 has been added to claim the compression-resistant core of Claim 1 which is able to resist at least about 12Mpa of pressure at a temperature of at least about 215°C for at least about 200 seconds in a direction essentially orthogonal to said plane defined by said first oriented strand face. Support for this inclusion can be found at paragraphs 20 and 26 of the disclosure. Applicant believes that no new matter has been introduced by this addition.

Claim 1 was objected on the basis of an informality which has been amended in accordance with the proposal of the Examiner.

Claims 1, 4, 5 and 37 were rejected by the Examiner under 35 USC §103(a) as being unpatentable over Winter in view Spivey. In particular, Winter is directed to a panel containing core layer comprised of one or more foam layers filled with bio-suppressant such as borate salts, specifically with the aim of deterring the entry of ants and other insects as well as acting as a fungicide and fire retardant. Although in one embodiment Winter refers to the use of a paper honeycomb in the core, it is apparent from the disclosure that in the disclosed embodiment the core *must* also comprise outer foam layers containing the borate salts. It is apparent, therefore, that Winter is not directed to a wood panel comprising a core layer with properties aimed at supporting the outer face thereby providing resistance to compression during the press cycle. Indeed, no mention is made in Winter as to the core being resistant to pressures which arise during a conventional single pass fabrication press cycle. Regarding Spivey, it is respectfully submitted that as Winter clearly does not teach the use of a compression-resistant core in the fabrication of a multi-layered wood panel the use of the oriented strand board

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comprising wood strips mixed with a phenolic resin as proposed in Spivey is of no relevance. It is therefore respectfully submitted that the present invention as claimed in claim 1 would not have been obvious to a person of ordinary skill in the art. As claims 4, 5 and 37 all depend from an allowed claim it is submitted that claims 4, 5 and 37 are also allowable.

Claims 2 and 3 have been rejected by the Examiner under 35 USC §103(a) as being unpatentable over Winter in view Spivey and further in view of Medawar. Applicant respectfully submits that the claims as amended traverse this objection. As discussed above Winter is not directed to a wood panel comprising a core layer with properties aimed at supporting the outer face thereby providing resistance to compression during the press cycle. Medawar, on the other hand, is directed to a method for reinforcing a collapsed or crushed honeycomb core structure against further collapse under pressure by filling the voids with the plastic material capable of withstanding pressure. Firstly, it is apparent in Medawar that the walls of the once honeycomb shaped crushed portion into which the reinforcing plastic material is introduced are not longer orthogonal to the surface of the panel. Secondly, the plastic material in Medawar is used to fill the void space in the core. In the present invention, the inorganic filler is added to the material used to form the core, and is not placed in the voids. In fact, filling the voids is undesirable as it increases the overall density of the product. The core structure proposed in Applicant's disclosure and verified in the examples relies on the material surrounding the voids not collapsing under pressures placed on the panel during fabrication, and thus the voids are preserved during hot pressing. It is therefore respectfully submitted that claims 2 and 3 would not have been obvious to one of ordinary skill in the art and therefore are allowable. In any case, it is submitted that claims 2 and 3, as depending from an allowable claim, are also allowable.


Claims 6 and 10 have been rejected by the Examiner under 35 USC §103(a) as being unpatentable over Winter in view Spivey and further in view of Haywood. Applicant respectfully submits that the claims as amended traverse this objection. Again, as discussed above Winter is not directed to a wood panel comprising a core layer with properties aimed at supporting the outer face thereby providing resistance to compression during the press cycle. Haywood, for its part, discloses the fabrication of

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articles, in particular boards, from a paper sludge precursor. No mention is made in Haywood of using boards fabricated according to the disclosure as the core of an oriented strand board composite structure or even of perforating the boards. The present invention at claim 6 claims a perforated mat fabricated from paper sludge being resistant to compression during the press cycle. Similarly, claim 10 claims a perforated mat fabricated from one of a variety of different materials including paper mill sludge, recycled paper, vulcanized rubber, thermoset plastics and volcanic rock, also resistant to compression during the press cycle. It is respectfully submitted that claims 6 and 10 would not have been obvious to one of ordinary skill in the art. In any case, it is respectfully submitted that both claim 6 and 10 as depending from allowable claims, are also allowable.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,
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Version with marking to show changes made

Claim 1 (Amended) An oriented strand board composite structure comprising:

a first oriented strand face having a layer of wood flakes mixed with a thermoset resin binder, said first oriented strand face defining a plane;

a second oriented strand face having a layer of wood flakes mixed with a thermoset resin binder; and

a core provided between said first oriented strand face and said second oriented strand face, said core comprising voids having boundaries that are essentially orthogonal to said plane defined by said first oriented strand face, said voids extending between said first and second oriented strand faces and said core being compression-resistant in a direction essentially orthogonal to said plane defined by said first oriented strand face.

Claim 2 A structure according to claim 37, wherein said core further comprises inorganic filler in the amount of about 10% to 80% by weight.

Claim 3 A structure according to claim 2, wherein said inorganic filler is one or more of clay, calcium carbonate, and titanium dioxide.

Claim 4 A structure according to claim 37, wherein said perforated mat is perforated such that it comprises between 0% and 75% voids by volume and wherein said core further comprises resin binder in an amount of less than 10% by weight.

Claim 5 A structure according to claim 37, wherein said perforated mat is perforated such that it comprises between 0% and 50% voids by volume and wherein said core further comprises resin binder in an amount of less than 5% by weight.

Claim 6 A structure according to claim 37, wherein said perforated mat consists essentially of paper mill sludge.

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Claim 10 A structure according to claim 4, wherein said perforated mat comprises one or more of paper mill sludge, recycled paper, vulcanized rubber, thermoset plastics, and volcanic rock.

Claim 37 (Amended) A structure according to claim 1, wherein said compression-resistant core comprises a perforated mat that is oriented such that the perforation boundaries are essentially orthogonal to the plane defined by said first oriented strand face.

Claim 39 (New) A structure according to claim 1, wherein said compression-resistant core is able to resist at least about 12Mpa of pressure at a temperature of at least about 215°C for at least about 200 seconds in a direction essentially orthogonal to said plane defined by said first oriented strand face.